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Research Article

# Four new species of leptonetid spiders (Araneae, Leptonetidae) from Anhui Province, China

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## Abstract

Four new species of leptonetid spiders from Anhui Province, China are recognized: *Jingneta qishan* Tong, **sp. nov.** (♂♀), *Jingneta wukuishan* Tong, **sp. nov.** (♂), *Leptonetela jingde* Tong, **sp. nov.** (♂♀) and *Rhyssoleptoneta lishan* Tong, **sp. nov.** (♂♀). An identification key to leptonetid spiders from Anhui is provided.

**Key words:** Asia, biodiversity, identification key, *Jingneta*, *Leptonetela*, new taxa, *Rhyssoleptoneta*, taxonomy

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## Introduction

Members of the family Leptonetidae Simon, 1890 are tiny (1–3 mm) and typically have six eyes, with the posterior median eyes displaced behind the anterior lateral eyes and the posterior lateral eyes, and anterior median eyes have been lost. Most species live in moist habitats, such as leaf litter, under rocks and in caves (Ledford et al. 2021).

Leptonetidae includes 22 genera and 392 species from North America, the Mediterranean, and East and Southeast Asia (World Spider Catalog 2024). Currently, 145 species belonging to eight genera have been recorded in China (Wang et al. 2020; Liu and Zhang 2022; Yang et al. 2022; Hu and Liu 2023; Liu et al. 2024). Anhui Province, a provincial-level administrative region of China, is located in the Yangtze River Delta region of East China (Fig. 14). Four species belonging to three genera have been recorded in Anhui Province: *Jingneta maculosa* (Song & Xu, 1986), *J. tunxiensis* (Song & Xu, 1986), *Leptonetela microdonta* (Xu & Song, 1983) and *Longileptoneta shenxian* Wang & Li, 2020 (Xu and Song 1983; Song and Xu 1986; Wang et al. 2020).

In this study, four new species of leptonetid spiders from the Anhui Province of China are described and illustrated. An identification key is provided.

* These authors contributed equally to this work.

## Materials and methods

Specimens used in this study were collected by sifting forest leaf litter and examined using a Leica M205 C stereomicroscope. Fine details were studied using an Olympus BX51 compound microscope. Female genitalia were cleared in lactic acid. Photomicroscope images were made with a Canon EOS 750D zoom digital camera (24.2 megapixels) mounted on an Olympus BX51 compound microscope. Photos were stacked with Helicon Focus ® (version 8.2.0) and processed in Adobe Photoshop CC 2020 ®. Scanning electron microscope images (SEM) were taken under high vacuum with a Hitachi S-4800 after critical-point drying and gold-palladium coating. Leg measurements are shown as: total length (femur, patella, tibia, metatarsus, tarsus) and, when missing, were coded as "–". All measurements were taken using an Olympus BX51 compound microscope and are in millimeters.

All specimens are preserved in 75% ethanol. The type material is deposited in the Shenyang Normal University (**SYNU**) in Liaoning, China (curator: Yanfeng Tong).

Terminology follows Wang et al. (2020) and Yang et al. (2022). The following abbreviations are used in the text and figures: AER = anterior eye row; ALE = anterior lateral eyes; at = atrium; emb = embolus; ma = median apophysis; mo = median outgrowth; ms = median sclerite; PER = posterior eye row; pl = prolateral lobe; PLE = posterior lateral eyes; PME = posterior median eyes; po = prolateral outgrowth; ps = prolateral sclerite; rl = retrolateral lobe; ro = retrolateral outgrowth; sc = scape; so = small outgrowth; sp = spermathecae; spr = short projection; ss = spermathecal stalk; ts = tarsal spur.

## Taxonomy

### Family Leptonetidae Simon, 1890

### Genus *Jingneta* Wang & Li, 2020

**Type species.** *Leptoneta cornea* Tong & Li, 2008.

**Diagnosis.** See Wang et al. (2020).

**Composition.** Twelve species, including two described here.

**Distribution.** China (Anhui, Beijing, Hebei).

### *Jingneta qishan* Tong, sp. nov.

https://zoobank.org/C77BF2C5-2968-4EAA-9F12-11D412A835DF

Figs 1–4, 13A, 14

**Type material.** ***Holotype*** China • ♂ (SYNU-1168); Anhui, Chizhou City, Guichi District, Qishan Scenic Area; 30°38'19"N, 117°29'57"E, 70 m; 12.I.2022; H. Fu & K. Yang leg. ***Paratype*:** China • ♀ (SYNU-1169), same data as holotype.

**Etymology.** The specific name refers to the type locality and is a noun in apposition.

**Diagnosis.** This new species is similar to *Jingneta exilocula* (Tong and Li 2008: fig. 2A–H) in the horn-shaped apophysis of palpal tibia, but can be distinguished by the chelicerae lacking a stridulatory file on the lateral margin

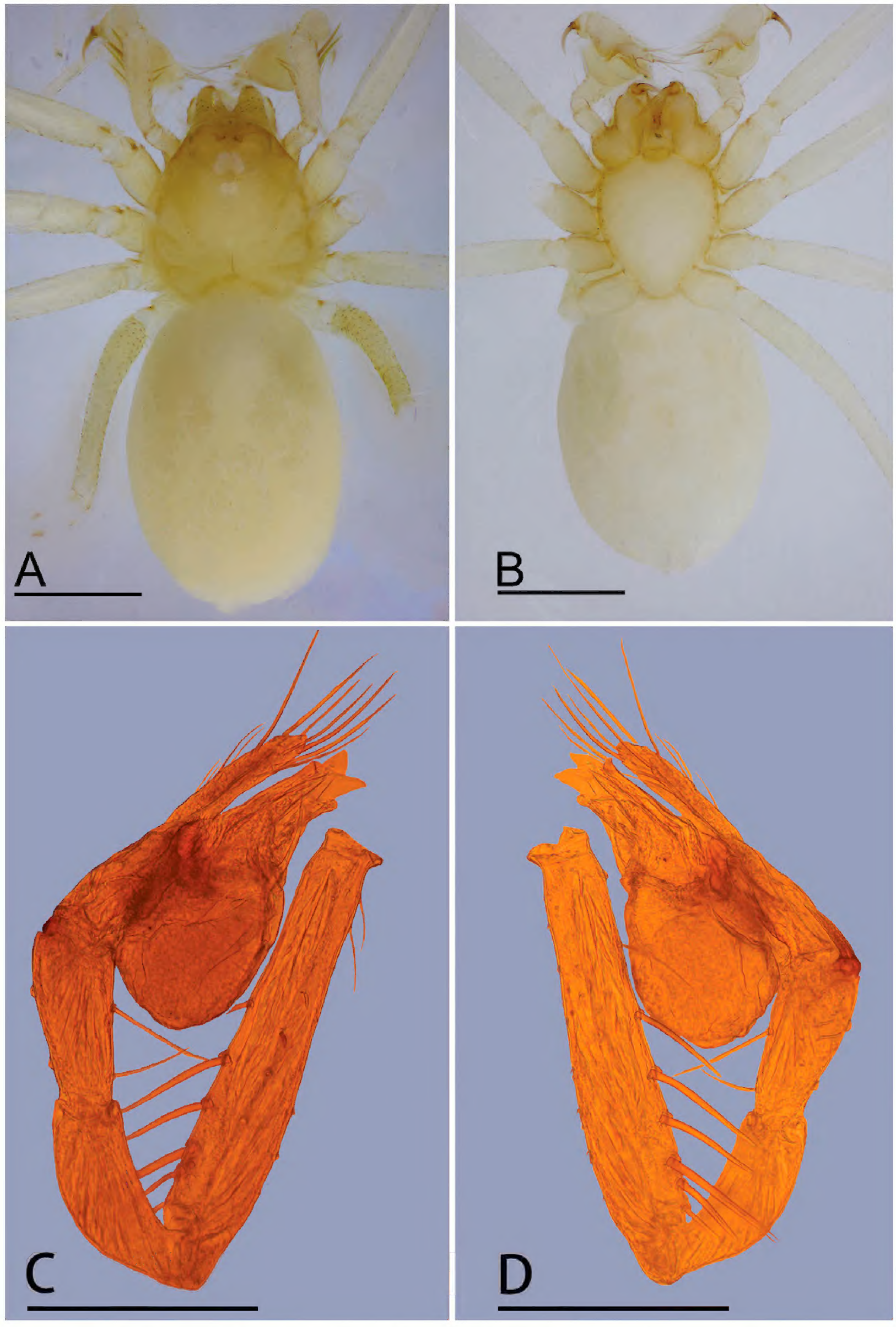


**Figure 1.** *Jingneta qishan* sp. nov., male **A, B** habitus, dorsal and ventral views **C, D** left palp, prolateral and retrolateral views. Scale bars: 0.4 mm (**A, B**); 0.3 mm (**C, D**).

(Fig. 13A) vs. with a stridulatory file, palpal femur with six long setae retrolaterally (Fig. 1D) vs. eight long setae, tip of bulb with a spine-like prolateral sclerite (Fig. 2A, C) vs. lacking and female genital area with a scape (Fig. 3C) vs. lacking.

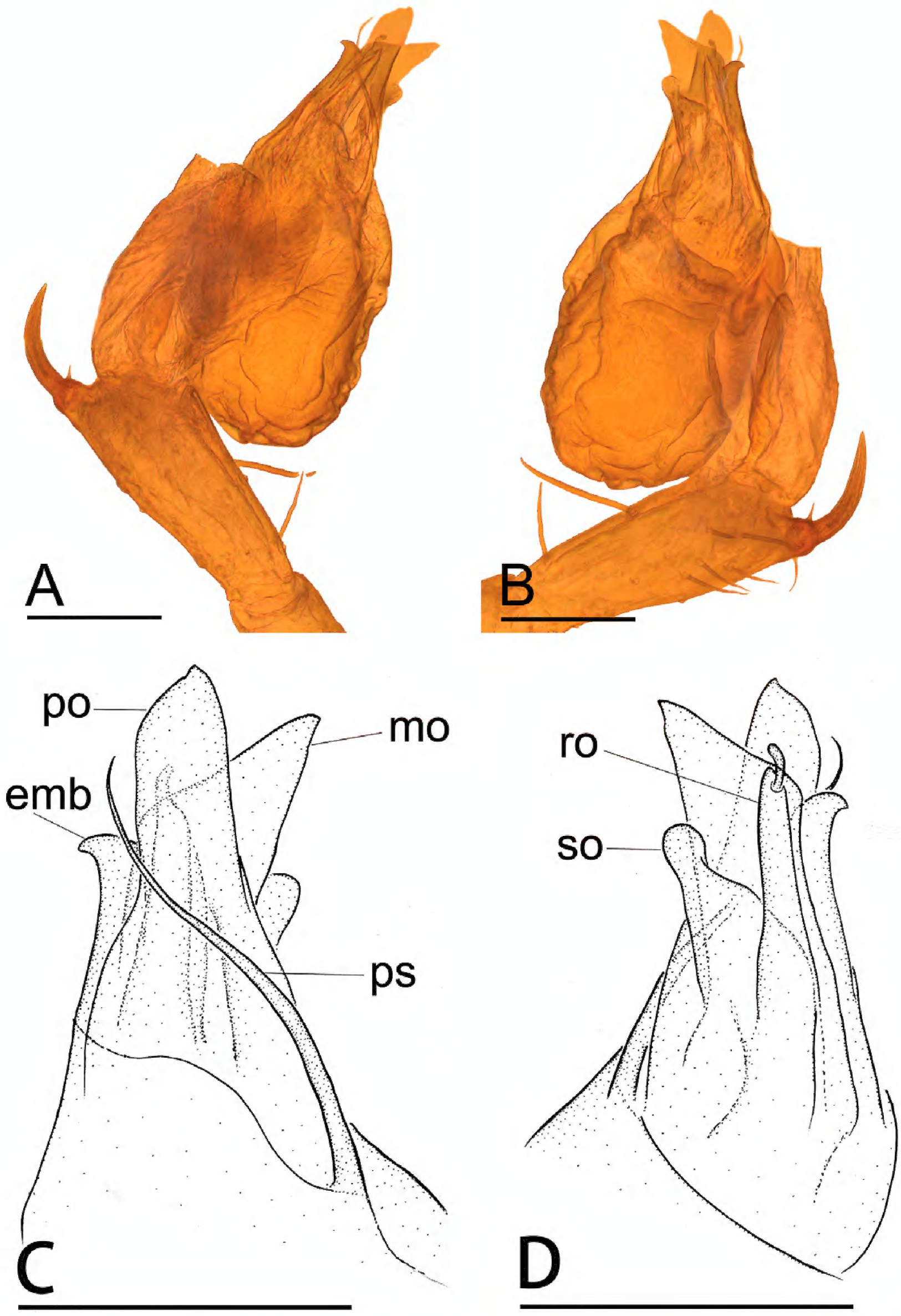


**Figure 2.** *Jingneta qishan* sp. nov. **A, B** left palpal bulb and tibia, prolateral and retrolateral views **C, D** distal part of bulb, prolateral and retrolateral views. Abbreviations: emb = embolus; mo = median outgrowth; po = prolateral outgrowth; ps = prolateral sclerite; ro = retrolateral outgrowth; so = small outgrowth. Scale bars: 0.1 mm.

**Description. Male** (holotype). Habitus as in Fig. 1A, B. Total length 1.55. Carapace 0.62 long, 0.59 wide. Abdomen 0.99 long, 0.68 wide. Eye sizes and interdistances: ALE 0.05, PLE 0.05, PME 0.04; ALE–PME 0.06, PLE–PLE 0.02, PLE–PME

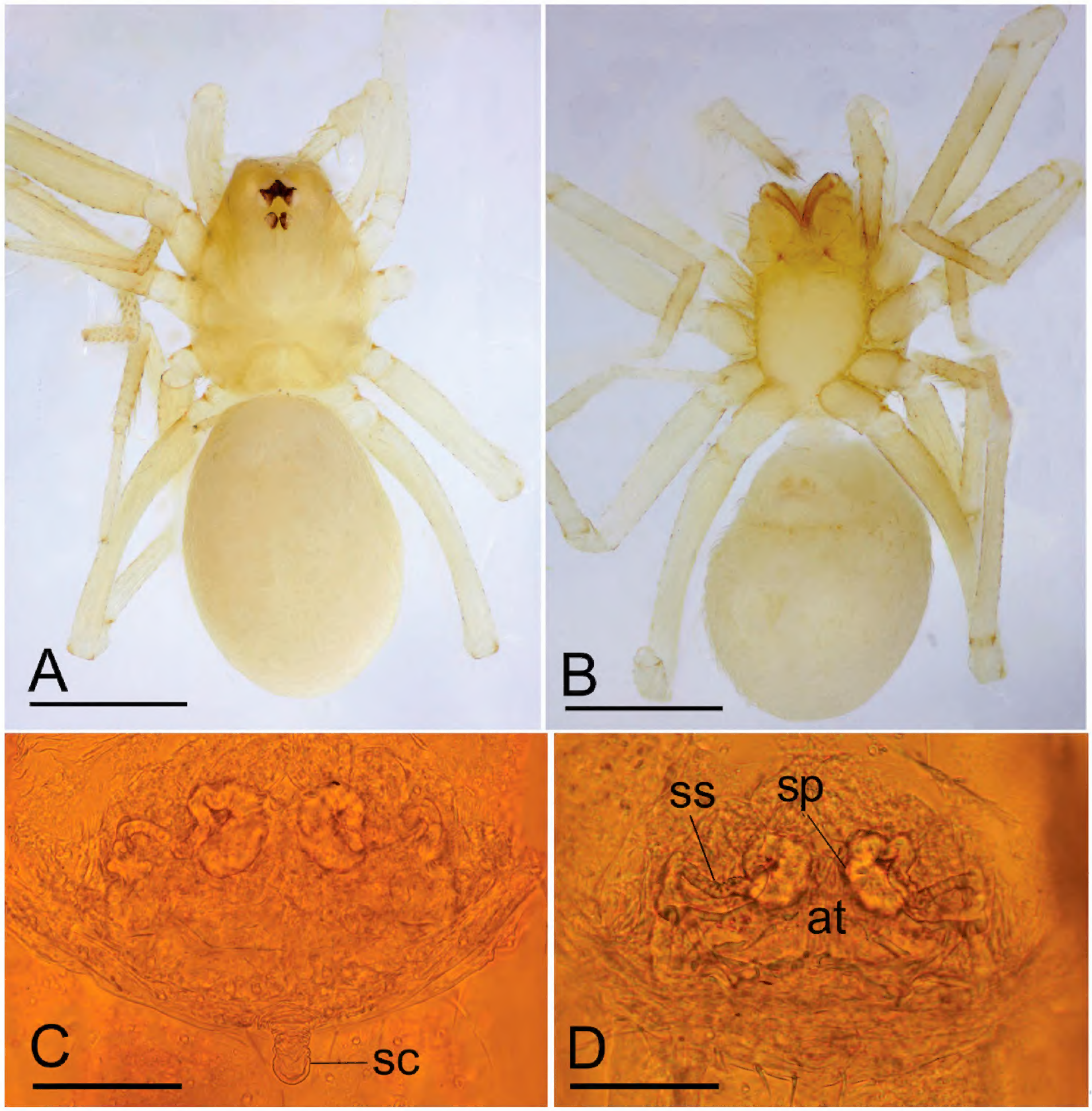


**Figure 3.** *Jingneta qishan* sp. nov., female **A, B** habitus, dorsal and ventral views **C, D** genitalia, ventral and dorsal views. Abbreviations: at = atrium; sc = scape; sp = spermathecae; ss = spermathecal stalk. Scale bars: 0.4 mm (**A, B**); 0.1 mm (**C, D**).

0.03; AER 0.08, PER 0.10. Carapace light yellow. Median groove, cervical grooves and radial furrows distinct. Chelicerae with eight large promarginal and five small retromarginal teeth. Labium rectangular; endites with serrula anterolaterally; sternum light yellow, longer than wide, heart shaped, smooth. Abdomen whitish, ovoid. Leg measurements: I - (1.15, 0.19, 1.16, 0.90, -); II - (0.94, 0.19, 0.95, 0.73, 0.59); III - (-, 0.19, 0.72, 0.64, 0.48); IV - (1.26, -, -, -, -). Metatarsus III with row of fine hairs ventrally (preening comb, arrow in Fig. 4H). Palp (Figs 1C–D, 2A–D, 4A–E): femur with six long setae retrolaterally; tibia with one horn-shaped apophysis distally; tip of bulb with triangular embolus, a spine-like prolateral sclerite and several outgrowths, including a leaf-shaped prolateral outgrowth, a median triangular outgrowth, a small outgrowth and a ribbon-shaped retrolateral outgrowth.

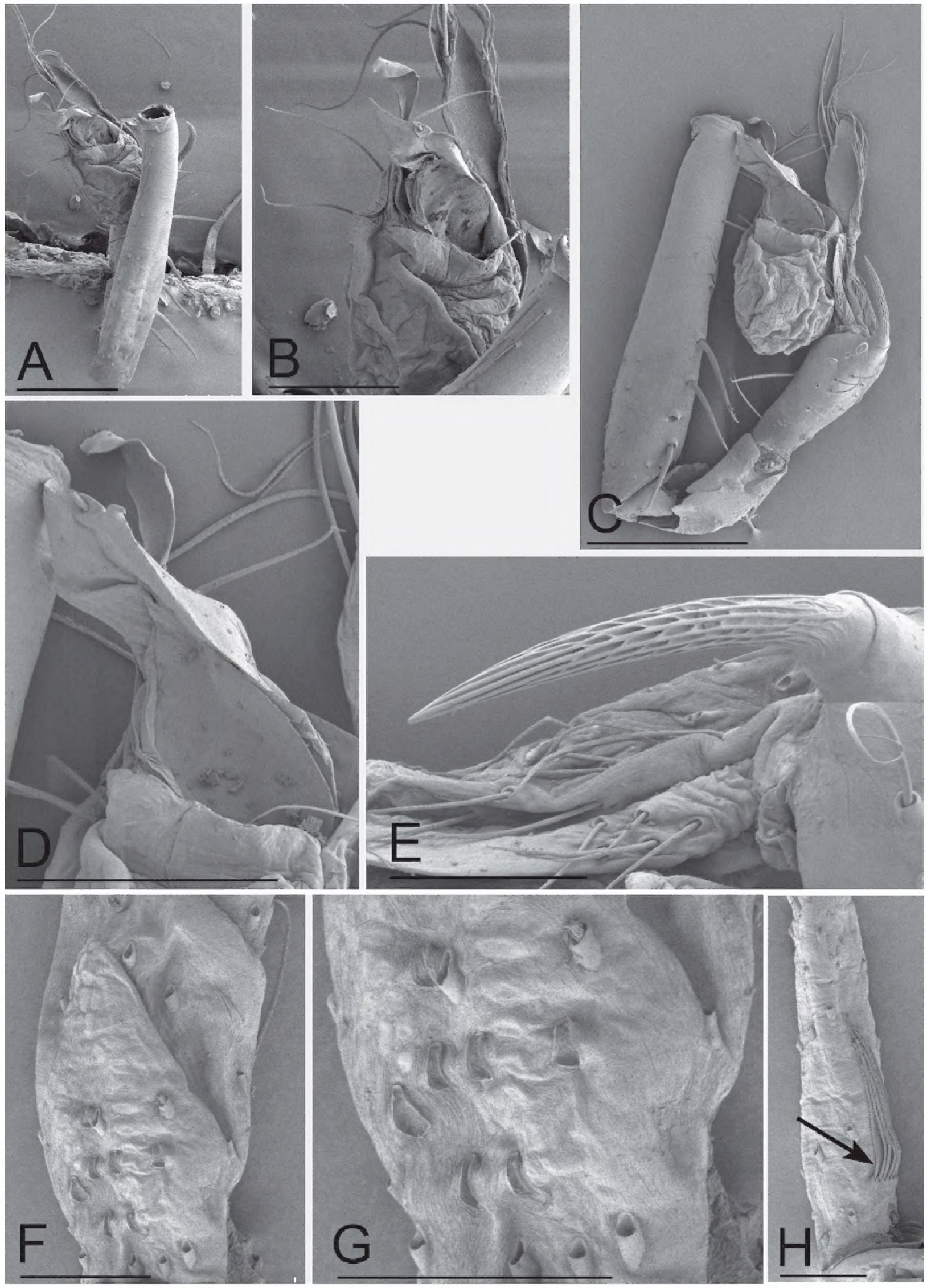


**Figure 4.** *Jingneta qishan* sp. nov., SEM **A, C** left palp, ventral and retrolateral views **B** bulb, ventral view **D** distal part of bulb, ventral view **E** detail of palpal tibial apophysis, lateral view **F** patella III, dorsal view **G** detail of patella III, dorsal view **H** metatarsus III, ventral view, arrow shows preening comb. Scale bars: 0.2 mm (**A, C**); 0.1 mm (**B, D**); 0.05 mm (**E–H**).

**Female** (paratype). Similar to male in general features. Habitus as in Fig. 3A, B. Total length 1.37. Carapace 0.61 long, 0.49 wide. Abdomen 0.77 long, 0.55 wide. Eye sizes and interdistances: ALE 0.05, PLE 0.05, PME 0.04; ALE–PME 0.10, PLE–PLE 0.03, PLE–PME 0.02; AER 0.08, PER 0.11. Leg measurements: I 2.19 (0.59, 0.21, 0.57, 0.45, 0.37); II 1.85 (0.50, 0.18, 0.46, 0.37, 0.34); III 1.64

(0.45, 0.18, 0.36, 0.35, 0.30); IV 2.38 (0.70, 0.18, 0.69, 0.46, 0.35). Genital area (Fig. 3C) with a scape on the posterior edge. Internal genitalia (Fig. 3D) with a pair of coiled spermathecae and sperm stalk; atrium oval.

**Distribution.** China (Anhui).

***Jingneta wukuishan* Tong, sp. nov.**

https://zoobank.org/91782FAE-C3E8-4350-A294-5F2A0DAF7E2F

Figs 5, 6, 13C, 14

**Type material.** ***Holotype*** CHINA • ♂ (SYNU-1170); Anhui, Huangshan City, She County, Wukui Mountain; 29°51'0"N, 118°24'55"E, 138 m; 3.I.2022; W. Cheng, H. Fu & K. Yang leg. ***Paratype*:** CHINA • 1 ♂ (SYNU-1171), same data as holotype.

**Etymology.** The specific name refers to the type locality and is a noun in apposition.

**Diagnosis.** This new species is similar to *Jingneta maculosa* (Song and Xu 1986: fig. 2A–C) in the dark stripes of abdomen, but can be distinguished by the chelicerae with seven promarginal teeth (Fig. 13C) vs. ten promarginal teeth, palpal femur with six long setae retrolaterally and tibia lacking specialized setae (Fig. 5D) vs. nine setae and tibia with three short blunt spines.

**Description. Male** (holotype). Habitus as in Fig. 5A, B. Total length 1.52. Carapace 0.61 long, 0.54 wide. Abdomen 0.93 long, 0.62 wide. Eye sizes and interdistances: ALE 0.06, PLE 0.06, PME 0.05; ALE–PME 0.06, PLE–PLE 0.04, PLE–PME 0.02; AER 0.11, PER 0.12. Carapace yellow to dark brown. Median groove, cervical grooves and radial furrows indistinct. Chelicerae with seven large promarginal and seven small retromarginal teeth. Labium rectangular; endites with serrula anterolaterally; sternum yellow to brown, longer than wide, heart shaped, smooth. Abdomen light brown, darker on sides, ovoid. Leg measurements: I 2.96 (0.83, 0.21, 0.78, 0.65, 0.49); II - (-, -, -, -, -); III 2.73 (0.75, 0.21, 0.67, 0.61, 0.49); IV 3.93 (1.08, 0.21, 1.20, 0.88, 0.56). Palp (Figs 5C, D, 6A–E): femur with six long setae retrolaterally; cymbium constricted medially, attached to a small earlobe-shaped process retrolaterally; tip of bulb with a strong spine-like prolateral sclerite and several membranous outgrowths.

**Female.** Unknown.

**Distribution.** China (Anhui).

## Genus *Leptonetela* Kratochvíl, 1978

*Guineta* Lin & Li, 2010: 6.
*Qianleptoneta* Chen & Zhu, 2008: 12.
*Sinoneta* Lin & Li, 2010: 82.

**Type species.** *Sulcia kanellisi* Deeleman-Reinhold, 1971.

**Diagnosis.** See Wang et al. (2017).

**Composition.** One hundred and twenty-three species, of which 9 species occur in Greece, 2 in Turkey, 1 in Azerbaijan and Georgia, 1 in Vietnam, and 110 species in China, including the one described here.

**Distribution.** Azerbaijan, China, Georgia, Greece, Turkey and Vietnam.

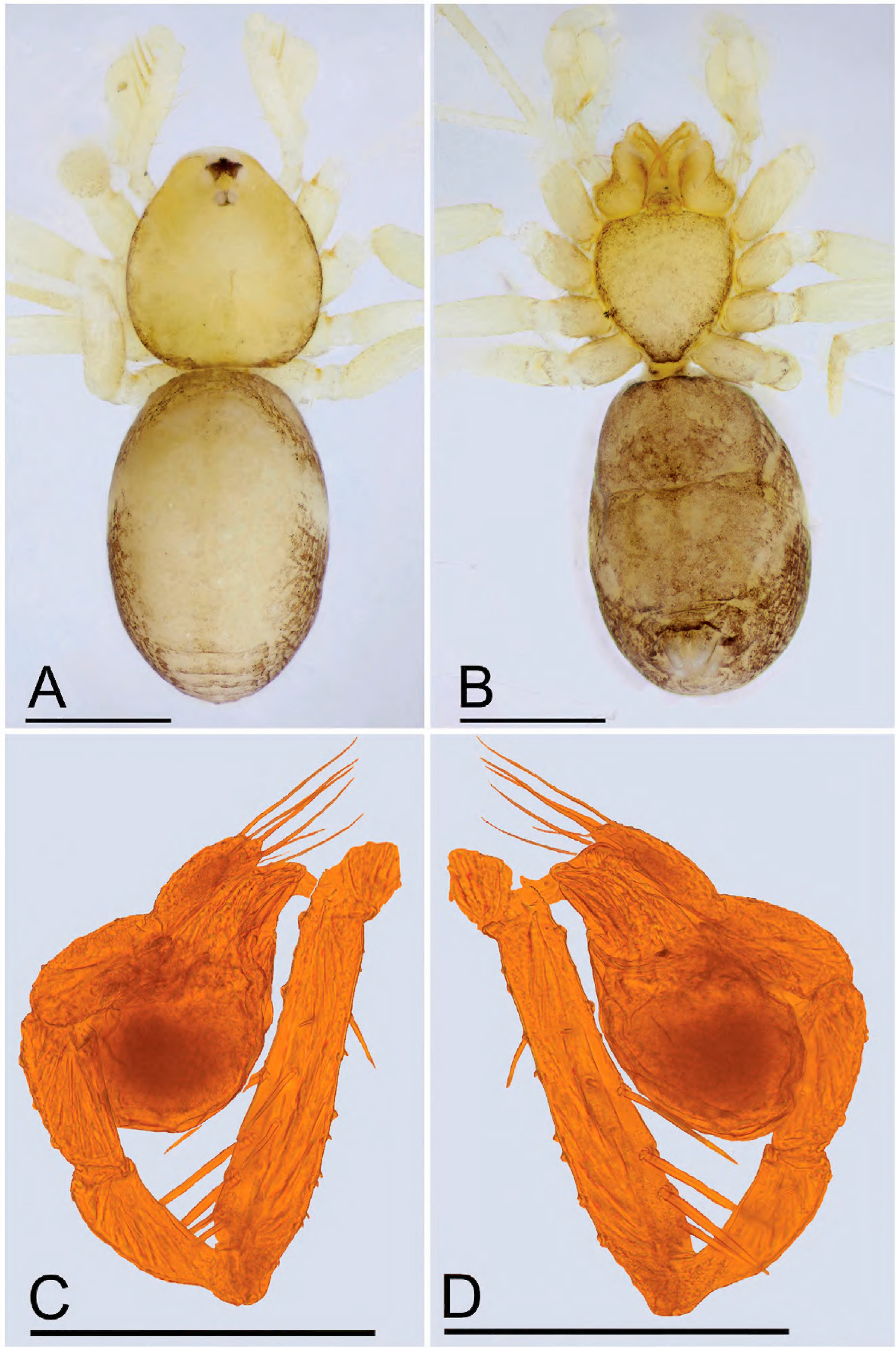


**Figure 5.** *Jingneta wukuishan* sp. nov., male **A, B** habitus, dorsal and ventral views **C, D** left palp, prolateral and retrolateral views. Scale bars: 0.4 mm (**A, B**); 0.3 mm (**C, D**).

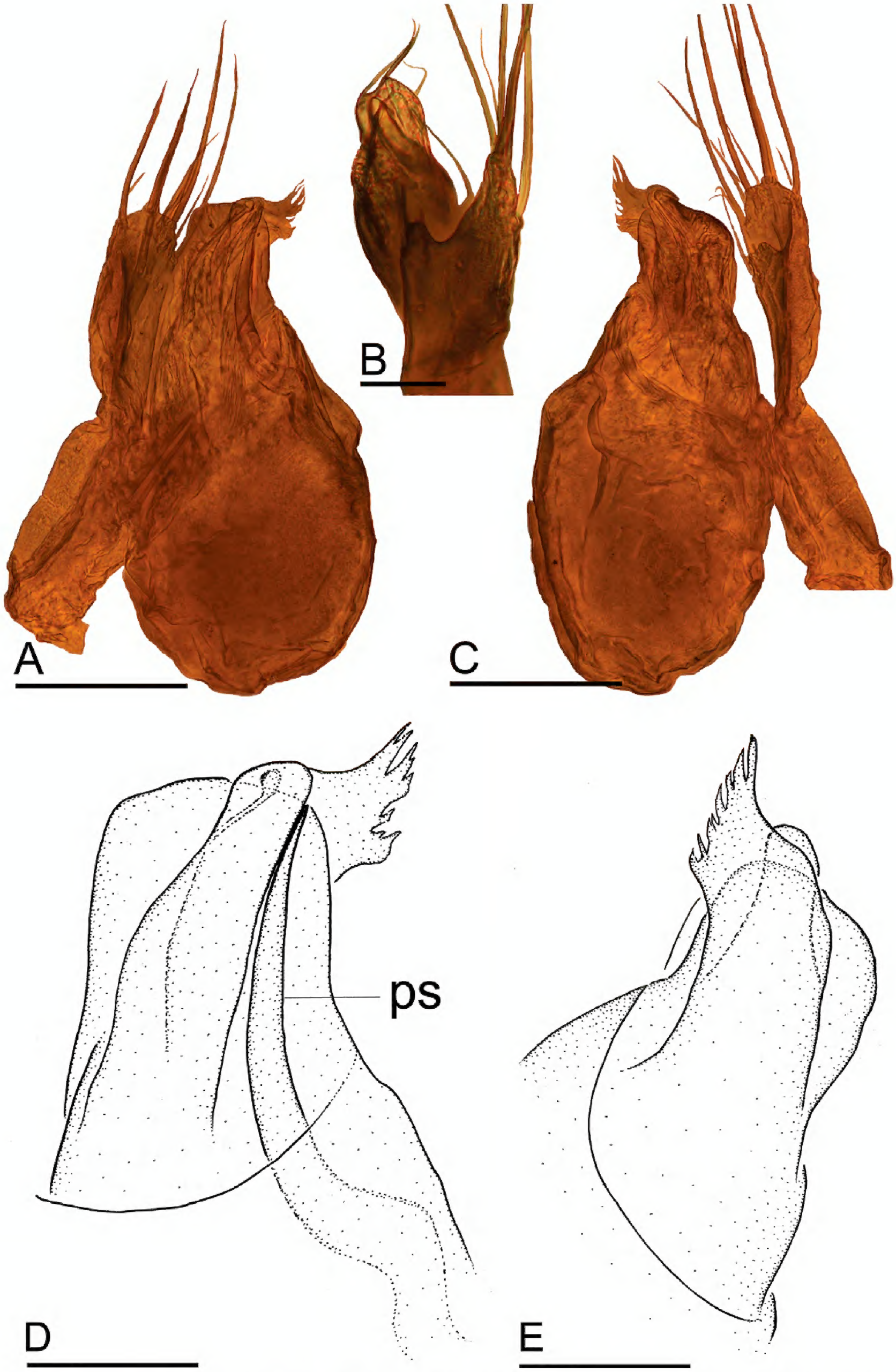


**Figure 6.** *Jingneta wukuishan* sp. nov. **A, B, C** left palp, prolateral, dorsal and retrolateral views **D, E** distal part of bulb, prolateral and retrolateral views. Abbreviation: ps = prolateral sclerite. Scale bars: 0.1 mm (**A, C**); 0.05 mm (**B, D, E**).

***Leptonetela jingde*** **Tong, sp. nov.**

https://zoobank.org/E77EDBB0-8D15-4419-8036-F727BE934CC4

Figs 7–9, 13B, 14

**Type material.** ***Holotype*** CHINA • ♂ (SYNU-1172); Anhui, Xuancheng City, Jingde County, Tu'er Mountain; 30°18'23"N, 118°32'15"E, 240 m; 7.I.2022; W. Cheng, H. Fu & K. Yang leg. ***Paratype*****:** CHINA • 4 ♂ 1 ♀ (SYNU-1173–1177), same data as holotype.

**Etymology.** The specific name refers to the type locality and is a noun in apposition.

**Diagnosis.** This new species is similar to *Leptonetela microdonta* (Wang and Li 2011: figs 28–31) in the long setae on palpal tibia, but can be distinguished by the chelicerae with seven promarginal teeth (Fig. 13B) vs. eight, palpal tibia with four long setae retrolaterally, the basal two thick (Fig. 7D) vs. six long setae, with the basal one thinner and the distal three thick, the prolateral sclerite spine-like (Fig. 8D) vs. fork-shaped, with five teeth distally and the abdomen with four dark chevron-shaped stripes (Figs 7A, 9A) vs. lacking.

**Description. Male** (holotype). Habitus as in Fig. 7A, B. Total length 1.25. Carapace 0.61 long, 0.59 wide. Abdomen 0.89 long, 0.73 wide. Eye sizes and interdistances: ALE 0.08, PLE 0.08, PME 0.07; ALE–PME 0.08, PLE–PLE 0.08, PLE–PME 0.03; AER 0.14, PER 0.17. Carapace light yellow. Median groove, cervical grooves and radial furrows distinct. Chelicerae with seven large promarginal and four small retromarginal teeth, with stridulatory file on the lateral margin. Labium rectangular; endites with serrula anterolaterally; sternum brown, shield shaped, smooth. Abdomen whitish, ovoid, with four dark chevron-shaped stripes. Leg measurements: I 2.66 (0.72, 0.17, 0.73, 0.57, 0.47); II 2.20 (0.62, 0.17, 0.55, 0.46, 0.40); III 1.97 (0.58, 0.18, 0.46, 0.46, 0.29); IV 2.45 (0.72, 0.17, 0.62, 0.54, 0.40). Palp (Figs 7C, D, 8A–E): femur without long setae retrolaterally; tibia with four long setae retrolaterally, the basal two thick; cymbium constricted medially, attached to a large earlobe-shaped process retrolaterally; tip of bulb with a short spine-like prolateral sclerite and leaf-shaped median apophysis.

**Female** (paratype). Similar to male in general features. Habitus as in Fig. 9A, B. Total length 1.36. Carapace 0.64 long, 0.58 wide. Abdomen 0.96 long, 0.80 wide. Eye sizes and interdistances: ALE 0.08, PLE 0.07, PME 0.07; ALE–PME 0.12, PLE–PLE 0.08, PLE–PME 0.02; AER 0.14, PER 0.17. Leg measurements: I - (0.73, 0.20, 0.67, 0.56, -); II 2.19 (0.62, 0.20, 0.52, 0.45, 0.40); III 1.97 (0.58, 0.18, 0.44, 0.45, 0.32); IV - (0.73, 0.21, 0.62, -, -). Internal genitalia (Fig. 9C, D) with sub-trapezoidal atrium, slightly swollen spermathecae, and convoluted spermathecal stalk including six coils.

**Distribution.** China (Anhui).

## Genus *Rhyssoleptoneta* Tong & Li, 2007

**Type species.** *Rhyssoleptoneta latitarsa* Tong & Li, 2007.

**Diagnosis.** See Tong and Li (2007) and Wang et al. (2012).

**Composition.** Three species, including one described here.

**Distribution.** China (Anhui, Beijing, Hebei).

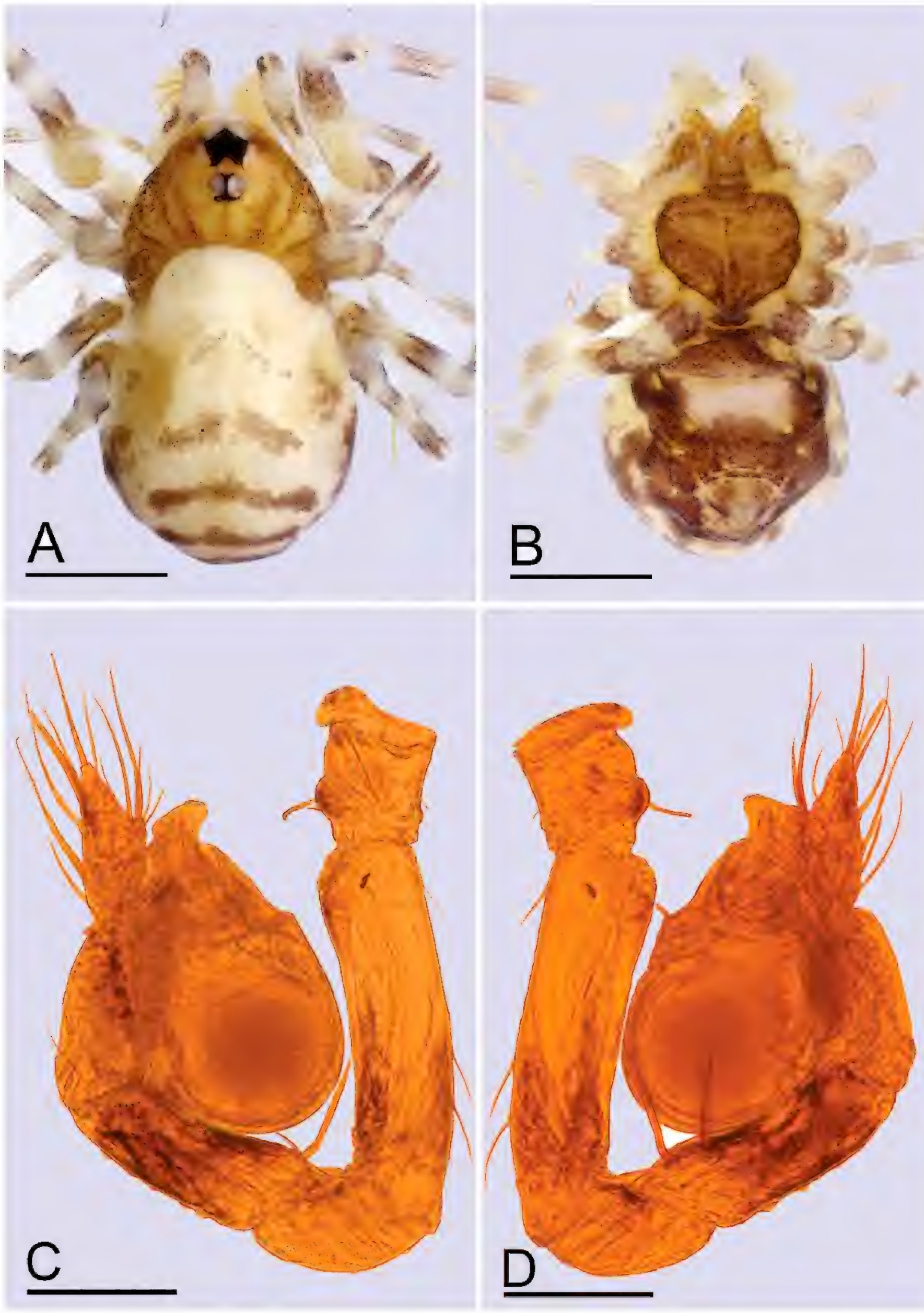


**Figure 7.** *Leptonetela jingde* sp. nov., male **A, B** habitus, dorsal and ventral views **C, D** left palp, prolateral and retrolateral views. Scale bars: 0.4 mm (**A, B**); 0.1 mm (**C, D**).

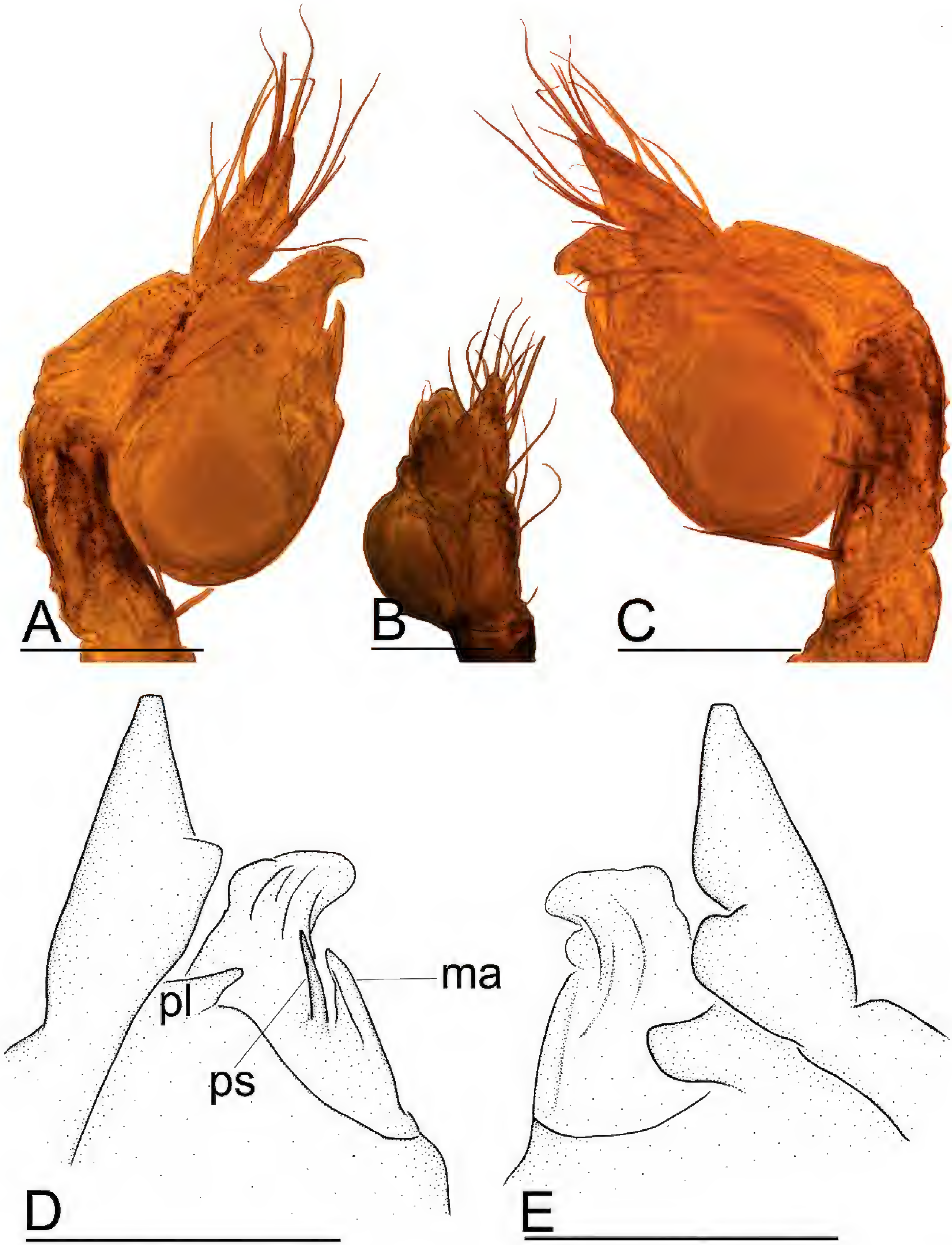


**Figure 8.** *Leptonetela jingde* sp. nov. **A, B, C** left palp, prolateral, dorsal and retrolateral views **D, E** detail of palpal bulb, prolateral and retrolateral views. Abbreviation: ma = median apophysis; pl = prolateral lobe; ps = prolateral sclerite. Scale bars: 0.1 mm.

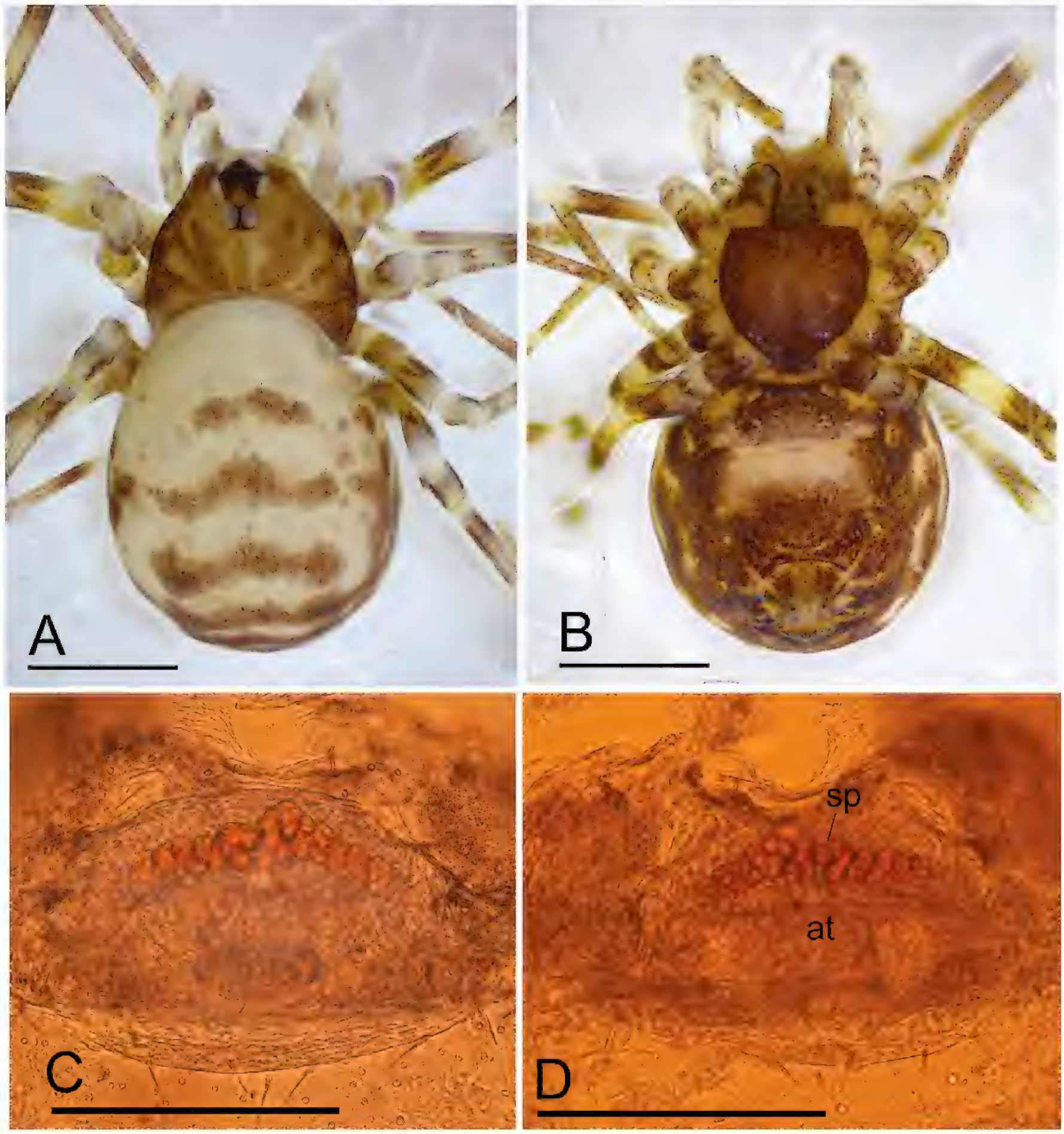


**Figure 9.** *Leptonetela jingde* sp. nov., female **A, B** habitus, dorsal and ventral views **C, D** genitalia, ventral and dorsal views. Abbreviations: at = atrium; sp = spermathecae. Scale bars: 0.4 mm (**A, B**); 0.2 mm (**C, D**).

***Rhyssoleptoneta lishan* Tong, sp. nov.**

https://zoobank.org/DF212BC3-9B09-4A97-B11F-73669221EAF3

Figs 10–12, 13D, 14

**Type material.** ***Holotype*** China • ♂ (SYNU-1163); Anhui, Chizhou City, Guichi District, Lishan Village; 30°36'28"N, 117°30'12"E, 20 m; 14.I.2022; H. Fu & K. Yang leg. ***Paratype*:** China • 1 ♀ (SYNU-1164), same data as holotype.

**Other material examined.** China • 3 ♀; Anhui, Chizhou City, Guichi District, Santaishan Park; 30°39'34"N, 117°28'21"E, 30 m; 13.I.2022; H. Fu & K. Yang leg.

**Etymology.** The specific name refers to the type locality and is a noun in apposition.

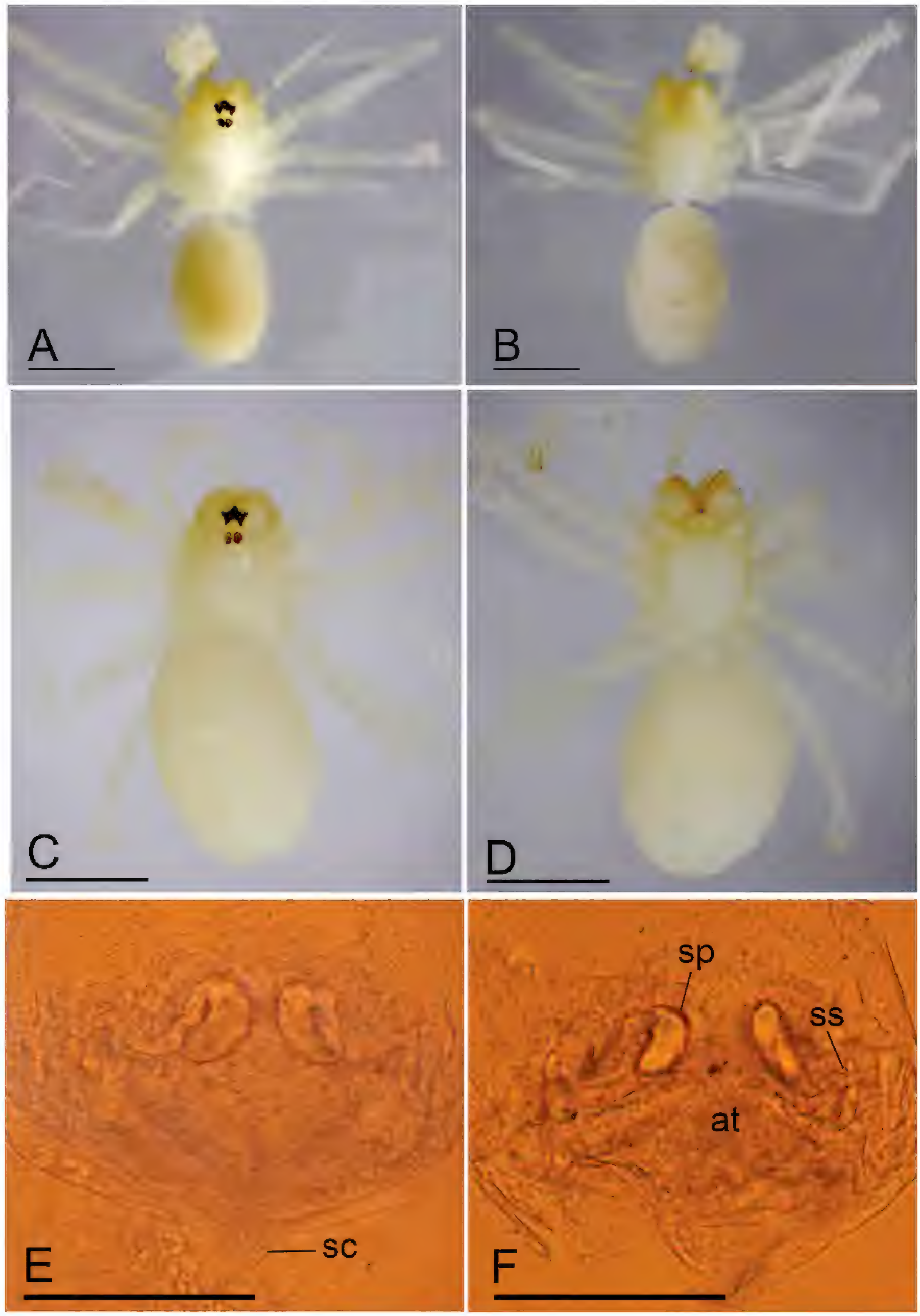


**Figure 10.** *Rhyssoleptoneta lishan* sp. nov. **A, B** male habitus, dorsal and ventral views **C, D** female habitus, dorsal and ventral views **E, F** genitalia, ventral and dorsal views. Abbreviations: at = atrium; sc = scape; sp = spermathecae; ss = spermathecal stalk. Scale bars: 0.4 mm (**A–D**), 0.1 mm (**E, F**).

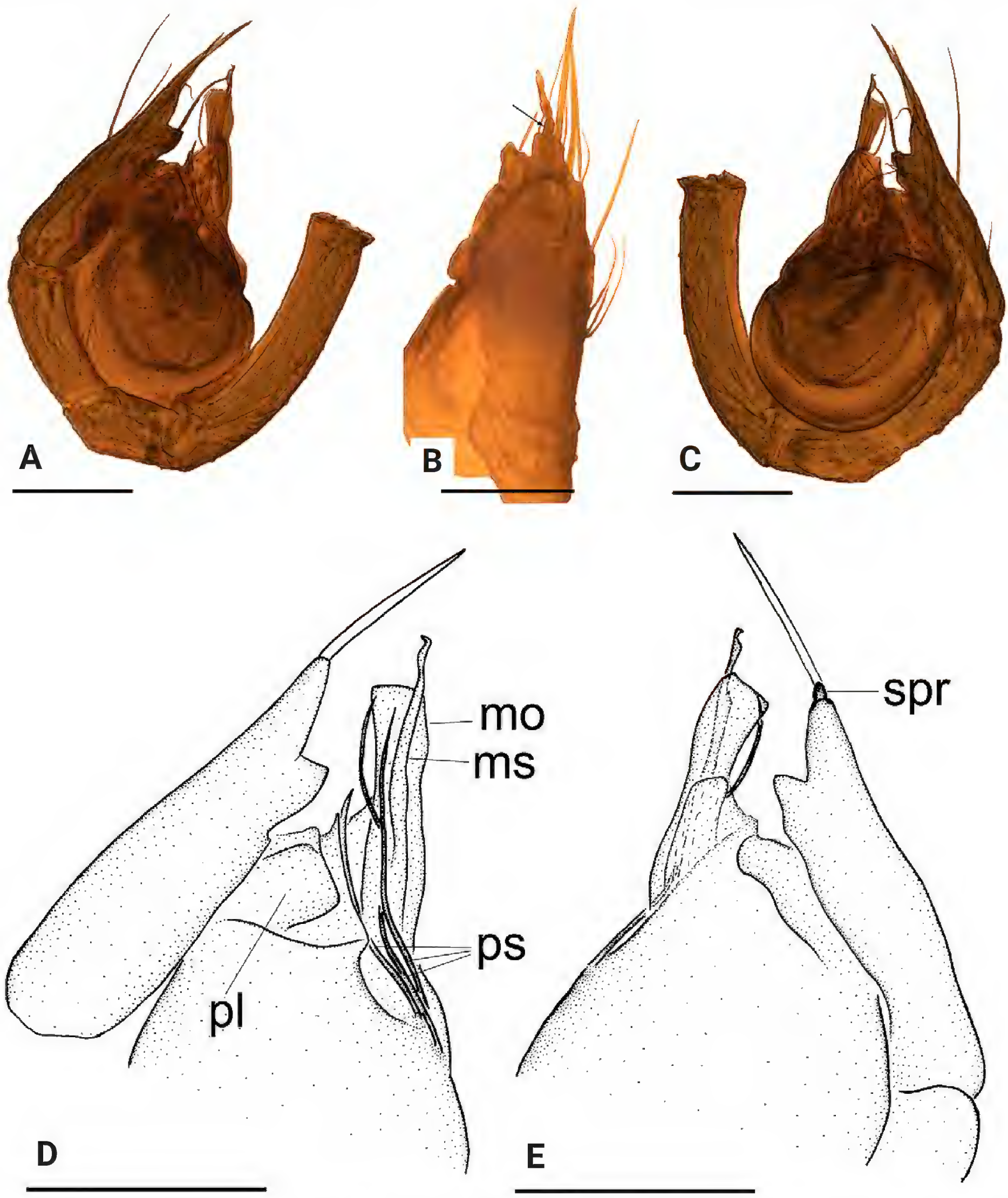


**Figure 11.** *Rhyssoleptoneta lishan* sp. nov. **A, B, C** left palp, prolateral, dorsal and retrolateral views, arrow shows the short projection **D, E** detail of palpal bulb, prolateral and retrolateral views. Abbreviations: mo = median outgrowth; ms = median sclerite; pl = prolateral lobe; ps = prolateral sclerite; spr = short projection. Scale bar: 0.1 mm.

**Diagnosis.** This new species is similar to *Rhyssoleptoneta aosen* (Zhu and Li 2021: figs 9A–D, 10A–C) in the scape of female genital area, but can be distinguished by the chelicerae with eight promarginal teeth and by the stridulatory file on the lateral margin (Fig. 13D) vs. seven promarginal teeth and lacking the stridulatory file, palpal bulb with membranous median outgrowth, without

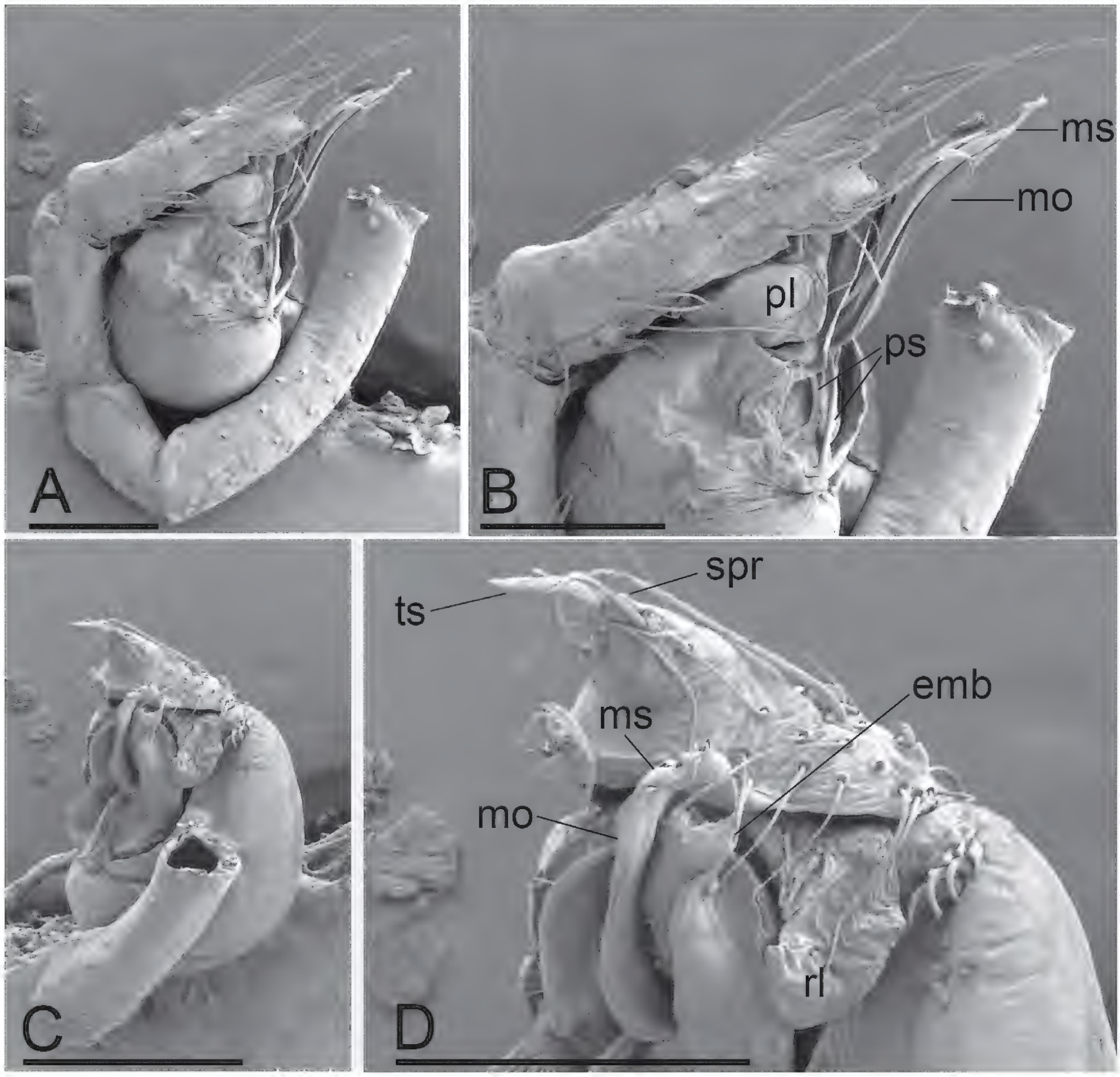


**Figure 12.** *Rhyssoleptoneta lishan* sp. nov., SEM **A, C** left palp, prolateral and dorsal views **B, D** detail of palpal bulb, prolateral and ventral views. Abbreviations: emb = embolus; mo = median outgrowth; ms = median sclerite; pl = prolateral lobe; ps = prolateral sclerite; rl = retrolateral lobe; spr = short projection; ts = tarsal spur. Scale bars: 0.1 mm.

tooth-shaped projections (Fig. 11D, E) vs. without median outgrowth but with three tooth-shaped projections, and the short projection of the palpal tarsus distally (Fig. 11E) vs. on the middle area.

**Description. Male** (holotype). Habitus as in Fig. 10A, B. Total length 1.31. Carapace 0.62 long, 0.50 wide. Abdomen 0.67 long, 0.45 wide. Eye sizes and interdistances: ALE 0.06, PLE 0.06, PME 0.04; ALE–PME 0.06, PLE–PLE 0.06, PLE–PME 0.02; AER 0.10, PER 0.12. Carapace light yellow. Median groove, cervical grooves and radial furrows indistinct. Chelicerae with eight large promarginal and four small retromarginal teeth, with stridulatory file on the lateral margin. Labium rectangular; endites with serrula anterolaterally; sternum whitish, longer than wide, heart shaped, smooth. Abdomen whitish, ovoid, with four dark chevron-shaped stripes.

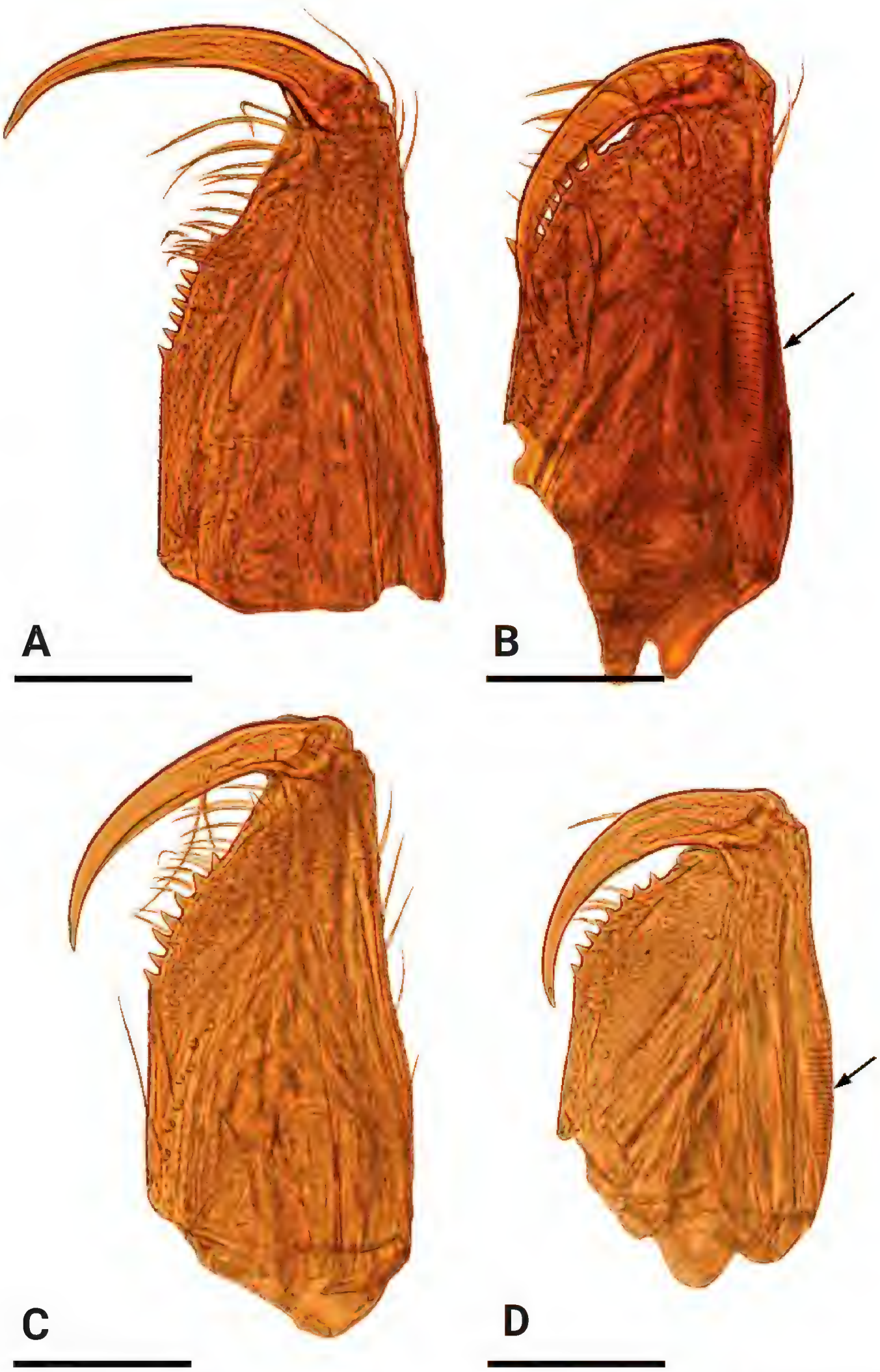


**Figure 13.** Male left chelicerae, posterior view **A** *Jingneta qishan* sp. nov. **B** *Leptonetela jingde* sp. nov. **C** *Jingneta wukuishan* sp. nov. **D** *Rhyssoleptoneta lishan* sp. nov. Arrows show the stridulatory file in B, D. Scale bars: 0.1 mm.

Leg measurements: I 2.51 (0.70, 0.19, 0.68, 0.55, 0.39); II 2.11 (0.59, 0.19, 0.53, 0.45, 0.35); III 1.80 (0.51, 0.17, 0.45, 0.40, 0.27); IV - (-, -, -, -, -). Male palp (Figs 11A–E, 12A–D): femur without long spines; tibia without special projection; tarsus wide, not branched distally, with a short projection and a long spur distally; bulb complex, wrinkled on prolateral surface, with 3 spine-like prolateral sclerites, with a membranous median outgrowth and belt-like median sclerite; embolus triangular.

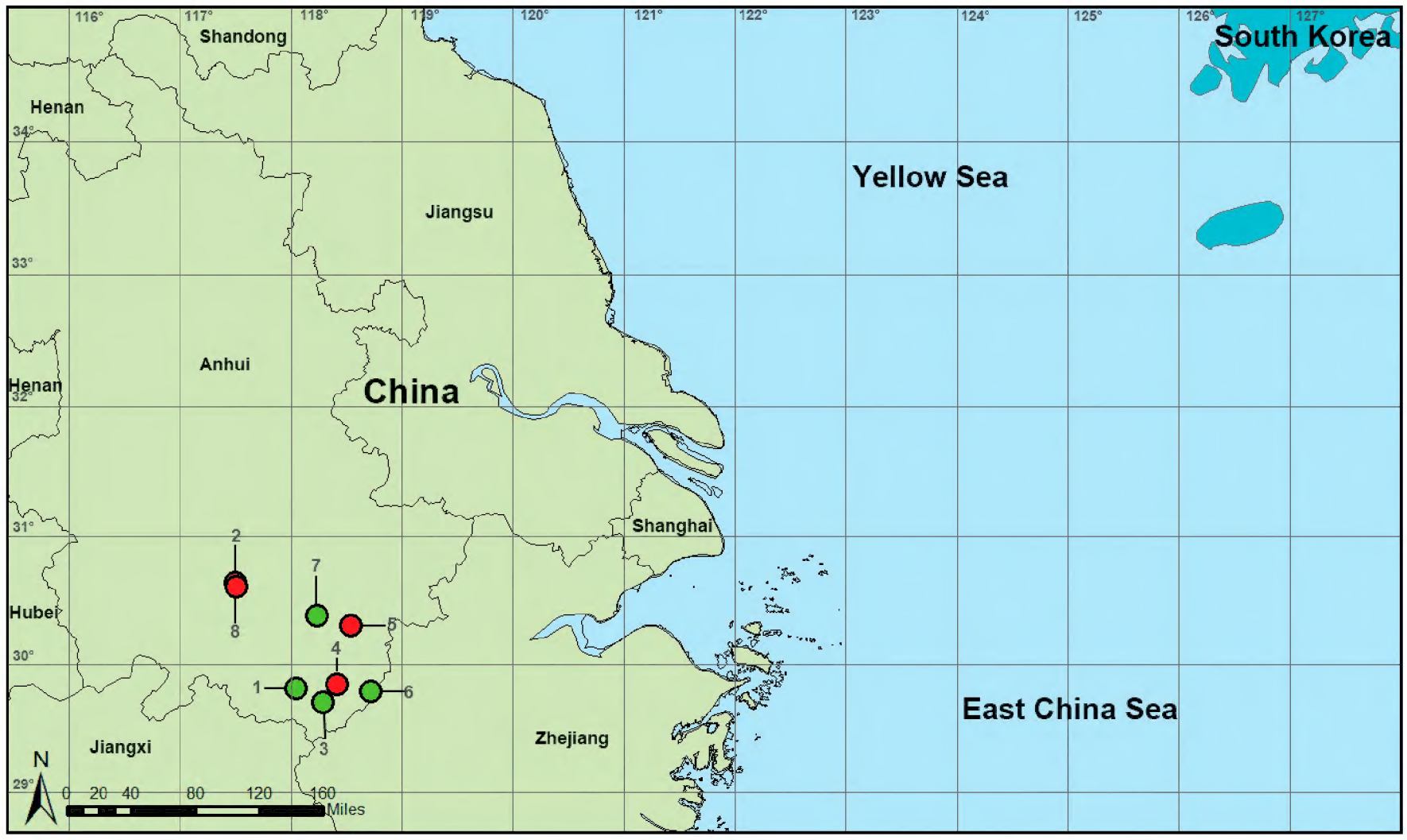


**Figure 14.** Distribution records of leptonetid spiders from Anhui, China, red circles refer to four new species, green circles indicate four known species **1** *Jingneta maculosa* **2** *Jingneta qishan* sp. nov. **3** *Jingneta tunxiensis* **4** *Jingneta wukuishan* sp. nov. **5** *Leptonetela jingde* sp. nov. **6** *Leptonetela microdonta* **7** *Longileptoneta shenxian* **8** *Rhyssoleptoneta lishan* sp. nov.

**Female** (paratype). Similar to male in general features. Habitus as in Fig. 10C, D. Total length 1.23. Carapace 0.54 long, 0.45 wide. Abdomen 0.80 long, 0.52 wide. Eye sizes and interdistances: ALE 0.05, PLE 0.05, PME 0.04; ALE–PME 0.06, PLE–PLE 0.05, PLE–PME 0.02; AER 0.09, PER 0.11. Leg measurements: I 1.95 (0.55, 0.15, 0.54, 0.38, 0.33); II 1.63 (0.43, 0.15, 0.44, 0.32, 0.29); III 1.44 (0.39, 0.15, 0.32, 0.31, 0.27); IV 2.11 (0.62, 0.16, 0.59, 0.43, 0.31). Genital area (Fig. 10E) with a scape on the posterior edge. Internal genitalia (Fig. 10F) with a pair of coiled spermathecae and sperm stalk; atrium triangular.

**Distribution.** China (Anhui).

## Key to leptonetid spiders from Anhui Province, China

Females of *Jingneta wukuishan* are unknown.

1 Males.....**2**
– Females.....**9**
2 Palpal femur with strong spines (Figs 1D, 5D).....**3**
– Palpal femur without strong spines (Figs 7D, 11A).....**7**
3 Eyes absent; palpal tibia with columnar apophyses; cymbium curved prolaterally, with prolateral spine (Wang et al. 2020: fig. 12D)..... ***Longileptoneta shenxian* Wang & Li, 2020**
– Eyes present; palpal tibia with one or two horn-shaped or spine-like apophyses; cymbium branched distally, without prolateral spine (Figs 1D, 2B).....**4**
4 Body light yellow, abdomen without dark stripes (Fig. 1A).....**5**
– Body dark brown, abdomen with dark stripes (Fig. 5A).....**6**

5 Male palpal tibia with one horn-shaped apophysis distally (Fig. 2B)..... ..... ***Jingneta qishan* sp. nov.**
– Male palpal tibia without horn-shaped apophysis (Song and Xu 1986: fig. 1C) ..... ***Jingneta tunxiensis* (Song & Xu, 1986)**
6 Chelicerae with ten promarginal teeth; palpal femur with nine long setae retrolaterally and tibia with three short blunt spines (Song and Xu 1986: fig. 2C)..... ***Jingneta maculosa* (Song & Xu, 1986)**
– Chelicerae with seven promarginal teeth (Fig. 13C); palpal femur with six long setae retrolaterally and tibia lacking specialized setae (Fig. 5D) ..... ..... ***Jingneta wukuishan* sp. nov.**
7 Palpal tibia without strong spines (Fig. 11A) ..... .....***Rhyssoleptoneta lishan* sp. nov.**
– Palpal tibia with a row of strong spines (Fig. 7D) .....**8**
8 Abdomen with dark chevron-shaped stripes (Fig. 7A); chelicerae with seven promarginal teeth (Fig. 13B); palpal tibia with four long setae retrolaterally, the basal two thick (Fig. 7D); prolateral sclerite spine-like (Fig. 8D)..... .....***Leptonetela jingde* sp. nov.**
– Abdomen without dark chevron-shaped stripes; chelicerae with eight promarginal teeth (Wang and Li 2011: figs 28A, 31C); palpal tibia with six long setae retrolaterally, the basal one thinner and the distal three thick (Wang and Li 2011: figs 28D, 30B); prolateral sclerite fork-shaped, with five teeth distally (Wang and Li 2011: figs 28B, 31D) ..... ..... ***Leptonetela microdonta* (Xu & Song, 1983)**
9 Abdomen with dark chevron-shaped stripes (Fig. 9A).....**10**
– Abdomen without dark chevron-shaped stripes .....**11**
10 Abdomen with four dark chevron-shaped stripes; spermathecal stalk including six coils (Fig. 9D).....***Leptonetela jingde* sp. nov.**
– Abdomen with three dark chevron-shaped stripes; spermathecal stalk straight, without coils (Song and Xu 1986: fig. 2B) ..... ..... ***Jingneta maculosa* (Song & Xu, 1986)**
11 Eyes absent (Wang et al. 2020: fig. 13A) ..... ..... ***Longileptoneta shenxian* Wang & Li, 2020**
– Eyes present .....**12**
12 Genital area with a scape (Fig. 3C) .....**13**
– Genital area without a scape .....**14**
13 Scape enlarged distally; atrium triangular (Fig. 10F) ..... .....***Rhyssoleptoneta lishan* sp. nov.**
– Scape not enlarged distally; atrium oval (Fig. 3D) .....***Jingneta qishan* sp. nov.**
14 Carapace with brown lateral margin; spermathecal stalk including six coils (Wang and Li 2011: figs 29C, 30B) ..... ..... ***Leptonetela microdonta* (Xu & Song, 1983)**
– Carapace without brown lateral margin; spermathecal stalk straight, without coils (Song and Xu 1986: fig. 1B).....***Jingneta tunxiensis* (Song & Xu, 1986)**

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# Additional information

## Conflict of interest

The authors have declared that no competing interests exist.

## Ethical statement

No ethical statement was reported.

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## Author contributions

YT designed the study. SL and QC finished the descriptions and took the photos. YT completed the hand drawings. SL and YT drafted and revised the manuscript.

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## Data availability

All of the data that support the findings of this study are available in the main text.

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